

any of three evaluated antibiotic. The use of resources as estimated according to Mexican Social Security Institutions expenses and its use were simulated within a decision tree with Bayesian approach. The model considered clinical success as the best health state, reached in either short hospital stay or long hospital stay and a therapeutic failure of first-line antibiotic therapy (DAP, VAN or LIN) which caused the use of a second-line antibiotic therapy (DAP or LIN depending on first election). Costs calculation considered hospital stay, concomitant medication and selected antibiotic treatment. Results were evaluated with incremental analysis and one-way sensitivity analysis of the most uncertain variables were also conducted. **RESULTS:** The use of i.v. Daptomycin as first-line therapy followed by i.v. Linezolid in case of therapeutic failure resulted in the lowest total cost per clinical success (DAP-LIN: \$3255.00 USD/CS; VAN-DAP: \$3310.00 USD/CS; VAN-LIN: \$3310.00 USD/CS; LIN-DAP: \$3423.00 USD), attaining a 98% of CS. The sensitivity analysis varying clinical success rates of every evaluated alternative showed robustness of base study. **CONCLUSIONS:** Daptomycin is the most cost-effective alternative in the treatment of CSSI when used as first-line antibiotic therapy since its use reduces the length of hospital stay reducing expenses of public health system budget in Mexico.

PSS8

COST-EFFECTIVENESS STUDY OF COMPLICATED SKIN AND SKIN-STRUCTURE INFECTIONS TREATMENT IN PUBLIC HEALTH CARE INSTITUTIONS IN MEXICO

Baca-Muro VI¹, Soria-Cedillo JF², Rosas R³, Martinez-Revelles M³, Olvera K³, Garcia-Contreras F⁴

¹Research Consulting, Puebla, Puebla, Mexico, ²Research Consulting, Hacienda Ojo de Agua, State of Mexico, Mexico, ³Novartis Farmaceutica Mexico, Mexico City, Mexico City, Mexico, ⁴Instituto Mexicano del Seguro Social, Mexico City, Mexico

OBJECTIVES: To determine the most cost-effective antibiotic treatment for complicated skin and skin-structure infections (CSSI) in public health care institutions in Mexico. **METHODS:** A cost-effectiveness study with institutional perspective was conducted comparing the use of either i.v. Daptomycin (DAP), i.v. Vancomycin (VAN) or i.v. Linezolid (LIN) as first-line antibiotic therapy. Data collection obtained with a systematic review considered efficacies measured as clinical improvement, length of stay at hospital services and adverse events. A decision tree with Bayesian approach was designed to simulate the use of resources based on patient's prognosis due to use one of the evaluated alternatives. Patients are supposed to reach either of two different health states: clinical success and therapeutic failure, the former can be attained through a short hospital stay or a long hospital stay depending on selected treatment, the latter requires the administration of a second-line antibiotic therapy increasing cost. Costs calculation considered hospital stay, concomitant medication and selected antibiotic treatment. Results were evaluated with incremental analysis and one-way sensitivity analysis of the most uncertain variables were also conducted. **RESULTS:** The use of i.v. Daptomycin results in the lowest total cost (DAP: \$3,078.00 USD; VAN: \$3,159.00 USD; LIN: \$3,173.00 USD) and the lowest cost per clinical success (CS) (DAP: \$3,405.00 USD/CS; VAN: \$3,550.00 USD/CS; LIN: \$3,870.00 USD/CS) compared with i.v. Vancomycin or i.v. Linezolid. The sensitivity analysis varying clinical success rates of every evaluated alternative showed robustness of base study. **CONCLUSIONS:** Daptomycin is the most cost-effective alternative in the treatment of CSSI when used as first-line antibiotic therapy since its use reduces the length of hospital stay reducing expenses of public health system budget in Mexico.

PSS9

REDUCTION OF ACUTE OTITIS MEDIA IN CHILDREN: A COST-CONSEQUENCE ANALYSIS OF THE NEW 10-VALENT PNEUMOCOCCAL NON-TYPEABLE HAEMOPHILUS INFLUENZAE PROTEIN-D CONJUGATE VACCINE (PHID-CV) COMPARED WITH THE 7-VALENT PNEUMOCOCCAL VACCINE (PCV-7)

Pereira JA, Ismail AS, Robson RC, Simson SD
GlaxoSmithKline, Mississauga, ON, Canada

OBJECTIVES: Acute otitis media (AOM) is a prevalent pediatric condition, affecting approximately 80% of children by three years of age. Routine immunization programs include 7-valent Pneumococcal conjugate vaccine (PCV-7), associated with a reduction of AOM events caused by *Streptococcus pneumoniae*. The objective of this study was to compare the costs and effects of PCV-7 with PHiD-CV, a newly approved in Canada Pneumococcal non-typeable *Haemophilus influenzae* Protein D-conjugate vaccine employing an active protein D-carrier associated with reduction of nontypeable *Haemophilus influenzae* (NTHi) AOM. **METHODS:** A steady-state, population-based model with a one-year time horizon was developed, and calibrated with Canadian epidemiologic and demographic data, to investigate the costs and effects associated with AOM episodes across the Canadian population. A 4-dose schedule for PHiD-CV vaccination was compared with a 4-dose schedule for PCV-7 vaccination. The base-case included herd-protection for invasive pneumococcal disease and serotype 6A cross protection. A health care system perspective was taken with the assumption of 100% vaccination coverage. **RESULTS:** Compared with PCV-7, vaccination with PHiD-CV could prevent an additional 170,951 ambulatory visits for AOM, 144,454 antibiotic prescriptions for AOM, and 9,830 hospitalizations for myringotomy per year. With PCV-7 the total direct costs associated with AOM are \$119.8 million of which \$16.9 million could be off-set by implementation of routine vaccination with PHiD-CV. **CONCLUSIONS:** Based on the base-case analysis, inclusion of PHiD-CV in routine immunization programs across Canada would be cost-saving to the health care system compared with PCV-7. PHiD-CV offers substantial benefits in terms of reduced ambu-

latory visits, antibiotic prescriptions and hospitalizations for AOM, a highly prevalent childhood condition.

PSS10

ECONOMIC BURDEN OF MODERATE TO SEVERE CHRONIC PLAQUE PSORIASIS IN CANADA

Davie AM¹, Brazier NC², Tsao NW¹, Goring SM¹, Albrecht LE³, Gratton D⁴, Lynde C⁵, Jivraj F², Levy AR¹

¹Oxford Outcomes Ltd, Vancouver, BC, Canada, ²Janssen-Ortho, Inc., Toronto, ON, Canada, ³Dr Lorne Albrecht Inc, Surrey, BC, Canada, ⁴Dr David Gratton International Dermatology Research Inc, Montréal, QC, Canada, ⁵Lynderm Research Inc, Markham, ON, Canada

OBJECTIVES: Psoriasis is a chronic debilitating immune-mediated inflammatory disease, with no cure, affecting an estimated one million Canadians. Studies show that up to 85% of psoriasis is of plaque type and up to 25% of sufferers have either moderate or severe disease. There are no reliable estimates of the economic burden of psoriasis in Canada. The objective is to estimate the economic burden of moderate to severe chronic plaque psoriasis in Canada in 2008, inclusive of direct medical and non-medical, and lost productivity costs. **METHODS:** Using a cross-sectional design, data were collected on 90 patients diagnosed with moderate or severe chronic plaque psoriasis in three dermatology clinics (British Columbia, Ontario, and Quebec). Data were obtained from three sources: clinic charts determining medical resources utilized for treatment; patient questionnaires eliciting information on non-medical resources utilized, lost productivity, and the impact on quality of life (QoL) using the Dermatology Quality of Life Index (DLQI); and unit costs (all in CDN\$2008) from published sources. **RESULTS:** The estimated mean annual costs of treating patients with moderate to severe chronic plaque psoriasis was \$7966/patient, of which \$4524 (95% confidence interval (CI): \$2246 to \$6802) was due to direct medical and non-medical costs, and \$3442 (95% CI: \$1293 to \$5590) was due to lost productivity. The estimated mean DLQI of 6.7 is reflective of a moderate impact on QoL in moderate to severe psoriasis patients. **CONCLUSIONS:** Extrapolating these costs to the estimated number of affected Canadians means that moderate to severe psoriasis costs on the order of \$961.3 million (95% CI: \$477.3 million to \$1.4 billion) in direct medical and non-medical costs annually. The total cost to society is approximately \$1.7 billion (95% CI: \$752.0 million to \$2.6 billion). This economic burden coupled with the QoL effect indicates the need for more efficient and long-term control.

PSS11

ECONOMIC BURDEN OF SEVERE CHRONIC HAND ECZEMA/ DERMATITIS IN CANADIAN ADULTS

Piwko C¹, Vicente C¹, Bereza BK^{1,2}, Ventin A³

¹PIVINA Consulting Inc, Thornhill, ON, Canada, ²University of Toronto, Toronto, ON, Canada, ³Basilea Pharmaceuticals Corp., Toronto, ON, Canada

OBJECTIVES: Severe Chronic Hand Eczema (CHE) or Chronic Hand Dermatitis (CHD), is characterized by thick scaly skin causing painful fissures, erythema, itching, blistering and oedema. Severe CHE/CHD is often unresponsive to conventional topical corticosteroids and results in substantial occupational, personal, and psychological disability. There is currently a lack of information regarding the economic burden of CHE/CHD in Canada. **METHODS:** A dynamic Excel® model was developed to estimate the cost of treating adults with severe CHE in Canada. Epidemiological/clinical data were derived from systematic literature searches. A Delphi panel of dermatologists provided estimates of resource utilization and validated epidemiological/clinical rates. Given the impact on lost productivity, a pseudo societal perspective was chosen; out of pocket expenses (travel and non-prescription pharmacotherapies) were excluded from the analysis. Unit costs were derived from Ontario standard lists and reported as 2008 Canadian dollars. **RESULTS:** In 2008 the estimated adult population was 26 million. From the literature it was determined that 10% of adults may be affected by CHE, of those 6.7% may have severe CHE/CHD. Assessing 50% of these patients don't adequately respond to topical corticosteroids, an estimated 87,200 Canadians have severe CHE being refractory to topicals. Treatment costs, including lost productivity, was calculated to be \$737 million per annum. Even assuming current second-line treatment options are 100% effective, the cost of severe CHE was estimated to be \$390 million per annum. **CONCLUSIONS:** This study estimated the costs of severe CHE/CHD unresponsive to topical corticosteroids in Canada ranges from \$390-\$737 million per annum. The majority of costs comes from lost productivity due to disease and accessing treatment.

PSS12

COST-UTILITY ANALYSIS OF POSTERIOR LAMELLAR KERATOPLASTY IN CANADA

Beauchemin C¹, Brunette F², Lachaine J¹

¹University of Montreal, Montreal, QC, Canada, ²Maisonneuve-Rosemont Hospital, Montreal, QC, Canada

OBJECTIVES: The purpose of this study was to assess the cost-utility of posterior lamellar keratoplasty techniques, including deep lamellar endothelial keratoplasty (DLEK), Descemet stripping endothelial keratoplasty (DSEK) and Descemet stripping automated endothelial keratoplasty (DSAEK), in the treatment of corneal endothelial diseases. **METHODS:** This cost-utility analysis was performed from a Canadian health system perspective over a lifetime period. A Markov model was constructed to compare the cost per quality adjusted life year (QALY) associated to penetrating keratoplasty (PK) and lamellar keratoplasty techniques (DLEK, DSEK and DSAEK). The Markov model included all major health states relevant to patients scheduled for corneal transplantation: waiting for transplantation, surviving graft with or without